FIG.1A

V_L sequence of the light chain of murine 44H104 mab:

```
ATG GAC ATG AGG GTT CCT GCT CAC GTT TTT GGC TTC TTG TTG CTC TGG TTT
MET Asp MET Arg Val Pro Ala His Val Phe Gly Phe Leu Leu Leu Trp Phe

CCA GGT ACC AGA TGT GAC ATC CAG ATG ACC CAG TCT CCA TCC TCC TTA TCT
Pro Gly Thr Arg Cys Asp Ile Gln MET Thr Gln Ser Pro Ser Ser Leu Ser

GCC TCT CTG GGA CAA AGA GTC AGT CTC ACT TGT CGG GCA AGT CAG GAA ATT
Ala Ser Leu Gly Gln Arg Val Ser Leu Thr Cys Arg Ala Ser Gln Glu Ile

AGT GGT TAC TTA ACC TGG CTT CAG CAG AAA CCA GAT GGA ACT ATT AAA CGC
Ser Gly Tyr Leu Thr Trp Leu Gln Gln Lys Pro Asp Gly Thr Ile Lys Arg

CTG GTC TAC GCC GCG TCC ACT TTA GAT TCT GGT GTC CCA AAA AGG TTC AGT
Leu Val Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser

GGC AGT AGG TCT GGG TCA GAT TAT TCT CTC ACC ATC AGC AGC CTT GAG TCT
Gly Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser leu Glu Ser

GAA GAT TTT GCA GAC TAT TAC TGT CTA CAA TAT ACT AAT TAT CCG CTC ACG
Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Thr Asp Tyr Pro Leu Thr

TTC GGT GCT GGG ACC AAG CTG GAG CTG AAA
Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
```

FIG.1B

V_H sequence of the heavy chain of murine 44H104 mab:

```
ATG GCT CTC CTG GTA CTG TTC CTC TCC CTG GCT GCA TTT CCA AGC TGT GGT
MET Ala Leu Leu Val Leu Phe Leu Ser Leu Ala Ala Phe Pro Ser Cys Gly

GTC CTG TCC CAG GTG CAG CTG AAG GAG TCA GGA CCT GGC CTG GTG GCG CCC
Val Leu Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro

TCA CAG AGC CTG TCC ATC ACT TGC ACT GTC TCT GGG TTT TCA TTA ACC AGC
Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser

TAT GGT GTA CAC TGG GTT CGC CAG CCT CCA GGA AAG GGT CTG GAG TGG CTG
Tyr Gly Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu

GGA GTA ATA TGG GCT GGT GGA AGC ATA AAT TAT AAT TCG GCT CTC ATG TCC
Gly Val Ser Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu MET Ser

AGA CTG AGC ATC AGC AAA GAC AAC TTC AAG AGC CAA GTT TTC TTA AAA ATG
Arg Leu Ser Ile Ser Lys Asp Asn Phe Lys Ser Gln Val Phe Leu Lys MET

AGC AGT CTG CAA ACT GAT GAC ACA GCC ATG TAC TAC TGT GCC AGA GCC TAT
Ser Ser Leu Gln Thr Asp Asp Thr Ala MET Tyr Tyr Cys Ala Arg Ala Tyr

GGT GAC TAC GTC CAC TAT GCT ATG GAC TAC TGG GGT CAA GGA ACC TCA GTC
Gly Asp Tyr Val His Tyr Ala MET Asp Tyr Trp Gly Gln Gly Thr Ser Val

ACC GCC TCC TCA
Thr Ala Ser Ser
```

FIGURE 9A

A - Non-Reduced

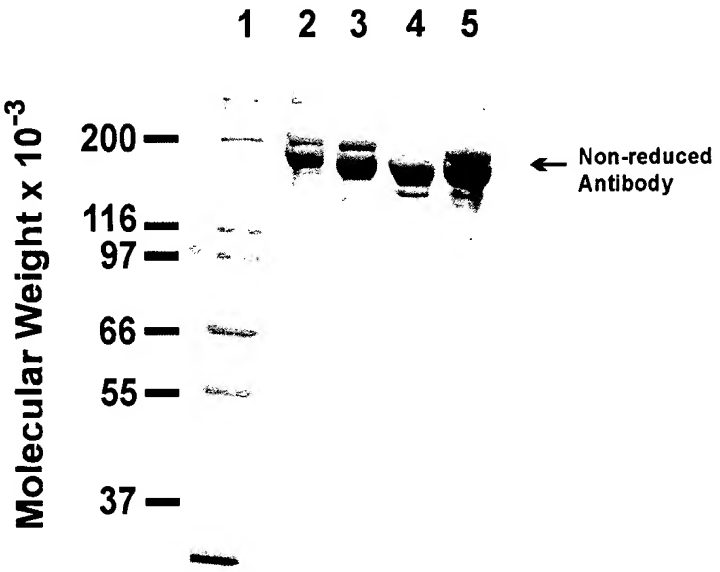
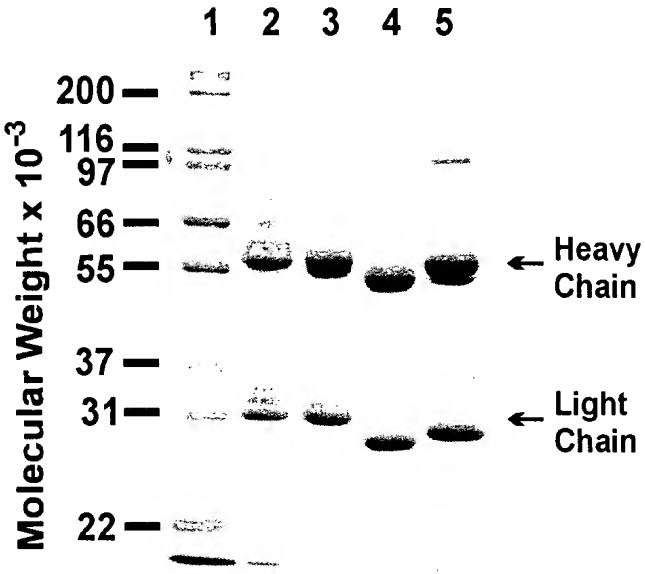


FIGURE 9B

B - Reduced



Lane 1 Molecular weight standards
Lane 2 Recombinant targeting antibody - Protein A purified
Lane 3 Recombinant targeting antibody - gel filtration purified
Lane 4 Mouse monoclonal antibody 44H104
Lane 5 Human IgG_1

FIG.9.

FIGURE 10 A

A - Non-Reduced

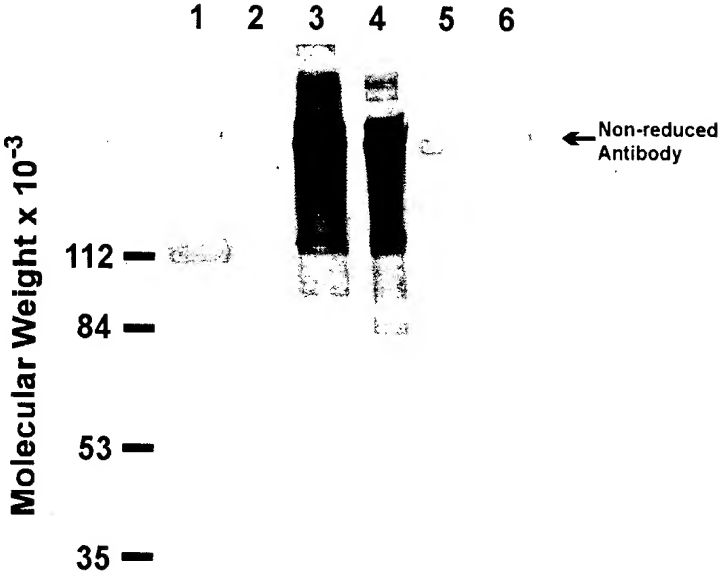
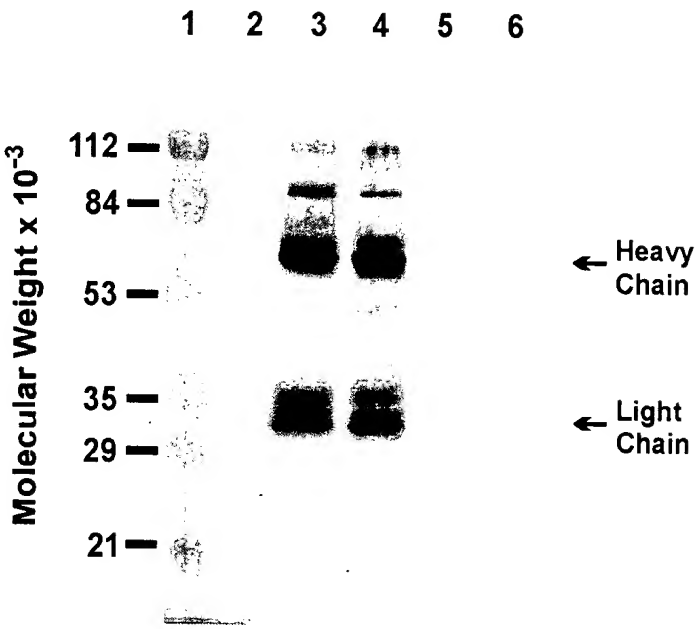


FIGURE 10B

B - Reduced



Lane 1 Molecular weight standards
Lane 2 Blank lane
Lane 3 Recombinant targeting antibody - Protein A purified
Lane 4 Recombinant targeting antibody - gel filtration purified
Lane 5 Mouse monoclonal antibody 44H104
Lane 6 Human IgG_1

FIG.10.

FIG.1A

V_L sequence of the light chain of murine 44H104 mab:

```
ATG GAC ATG AGG GTT CCT GCT CAC GTT TTT GGC TTC TTG TTG CTC TGG TTT
MET Asp MET Arg Val Pro Ala His Val Phe Gly Phe Leu Leu Leu Trp Phe

CCA GGT ACC AGA TGT GAC ATC CAG ATG ACC CAG TCT CCA TCC TCC TTA TCT
Pro Gly Thr Arg Cys Asp Ile Gln MET Thr Gln Ser Pro Ser Ser Leu Ser

GCC TCT CTG GGA CAA AGA GTC AGT CTC ACT TGT CGG GCA AGT CAG GAA ATT
Ala Ser Leu Gly Gln Arg Val Ser Leu Thr Cys Arg Ala Ser Gln Glu Ile

AGT GGT TAC TTA ACC TGG CTT CAG CAG AAA CCA GAT GGA ACT ATT AAA CGC
Ser Gly Tyr Leu Thr Trp Leu Gln Gln Lys Pro Asp Gly Thr Ile Lys Arg

CTG GTC TAC GCC GCG TCC ACT TTA GAT TCT GGT GTC CCA AAA AGG TTC AGT
Leu Val Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser

GGC AGT AGG TCT GGG TCA GAT TAT TCT CTC ACC ATC AGC AGC CTT GAG TCT
Gly Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser leu Glu Ser

GAA GAT TTT GCA GAC TAT TAC TGT CTA CAA TAT ACT AAT TAT CCG CTC ACG
Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Thr Asp Tyr Pro Leu Thr

TTC GGT GCT GGG ACC AAG CTG GAG CTG AAA
Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
```

FIG.1B

V_H sequence of the heavy chain of murine 44H104 mab:

```
ATG GCT CTC CTG GTA CTG TTC CTC TCC CTG GCT GCA TTT CCA AGC TGT GGT
MET Ala Leu Leu Val Leu Phe Leu Ser Leu Ala Ala Phe Pro Ser Cys Gly

GTC CTG TCC CAG GTG CAG CTG AAG GAG TCA GGA CCT GGC CTG GTG GCG CCC
Val Leu Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro

TCA CAG AGC CTG TCC ATC ACT TGC ACT GTC TCT GGG TTT TCA TTA ACC AGC
Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser

TAT GGT GTA CAC TGG GTT CGC CAG CCT CCA GGA AAG GGT CTG GAG TGG CTG
Tyr Gly Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu

GGA GTA ATA TGG GCT GGT GGA AGC ATA AAT TAT AAT TCG GCT CTC ATG TCC
Gly Val Ser Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu MET Ser

AGA CTG AGC ATC AGC AAA GAC AAC TTC AAG AGC CAA GTT TTC TTA AAA ATG
Arg Leu Ser Ile Ser Lys Asp Asn Phe Lys Ser Gln Val Phe Leu Lys MET

AGC AGT CTG CAA ACT GAT GAC ACA GCC ATG TAC TAC TGT GCC AGA GCC TAT
Ser Ser Leu Gln Thr Asp Asp Thr Ala MET Tyr Tyr Cys Ala Arg Ala Tyr

GGT GAC TAC GTC CAC TAT GCT ATG GAC TAC TGG GGT CAA GGA ACC TCA GTC
Gly Asp Tyr Val His Tyr Ala MET Asp Tyr Trp Gly Gln Gly Thr Ser Val

ACC GCC TCC TCA
Thr Ala Ser Ser
```

Assembly of gene encoding CLTB36

Amino acid seq. GPKEPFRDYVDRFYK NKRKRIHIGPGRAFYTTKN

Gene seq. GGTCTAAAGAACCTTTTAGAGACTATGTTGATAGGTTTTA
TAAGAATAAGAGGAAGAGGATACATATAGGGCCTGGT
AGGGCTTTTTATACTACTAAGAATTAATAA

FIG.2A

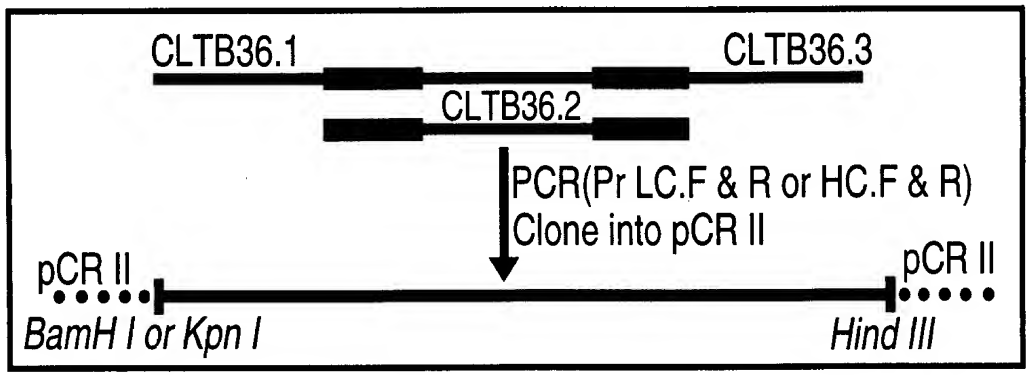


FIG.2B

CLTB36.1 CATTATGGATCCGGTCCTAAAGAACCTTTTAGAGACTATGTTGAT
AGGTTTTATAAGAAT

CLTB36.2 GCCCTACCAGGCCCTATATGTATCCTCTTCCTCTTATTCTTATAAA
ACCTA

CLTB36.3 AGGGCCTGGTAGGGCTTTTTATACTACTAAGAATTAATAAAAGCT
TTAGCG

BamH I

Pr LC.F CATTATGGATCCGGTCCTAA

Kpn I

Pr HC.F GTCAGGTACCGGTCCTAAAGAACCTTTTAG

Hind III

Pr R GGCTAAAGCTTTTATTAATTC

FIG.2C

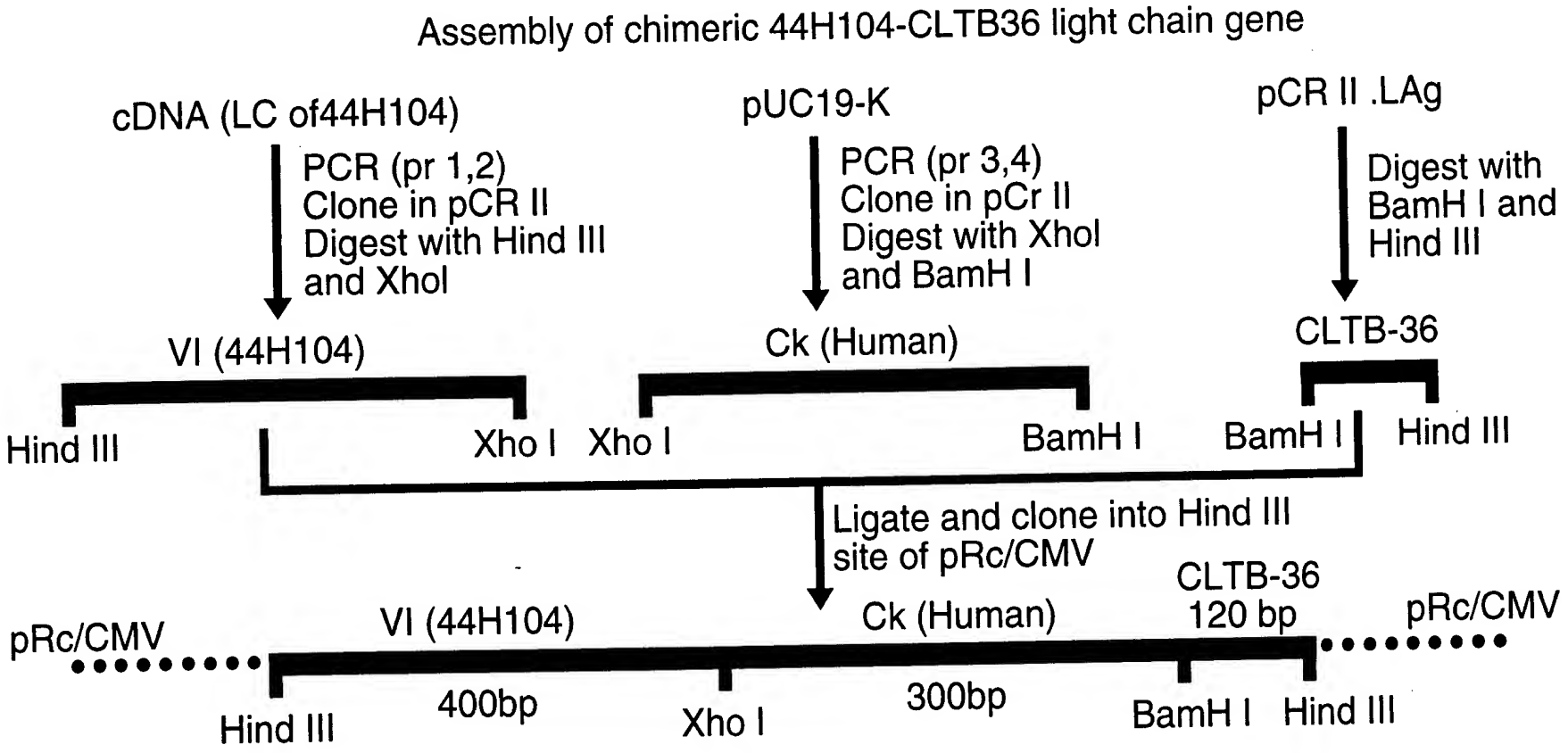


FIG.3A.

Hind III

Pr. 1 AGCCTAAGCTTCCGCCATGGACATGAGGGTTCCTGCTC

Xho I

Pr. 2 CCGTTTCAGCTCGAGCTTGGTCCCAGCACCGAA

Xho I

Pr. 3 CCTACTCGAGCTGAAACGGACTGTGGCTGCACCATCTGTC

BamH I

Pr. 4 ATTAAAGCTTTTACTAGGATCCACACTCTCCCCTGTTGAAGCTC

FIG.3B.

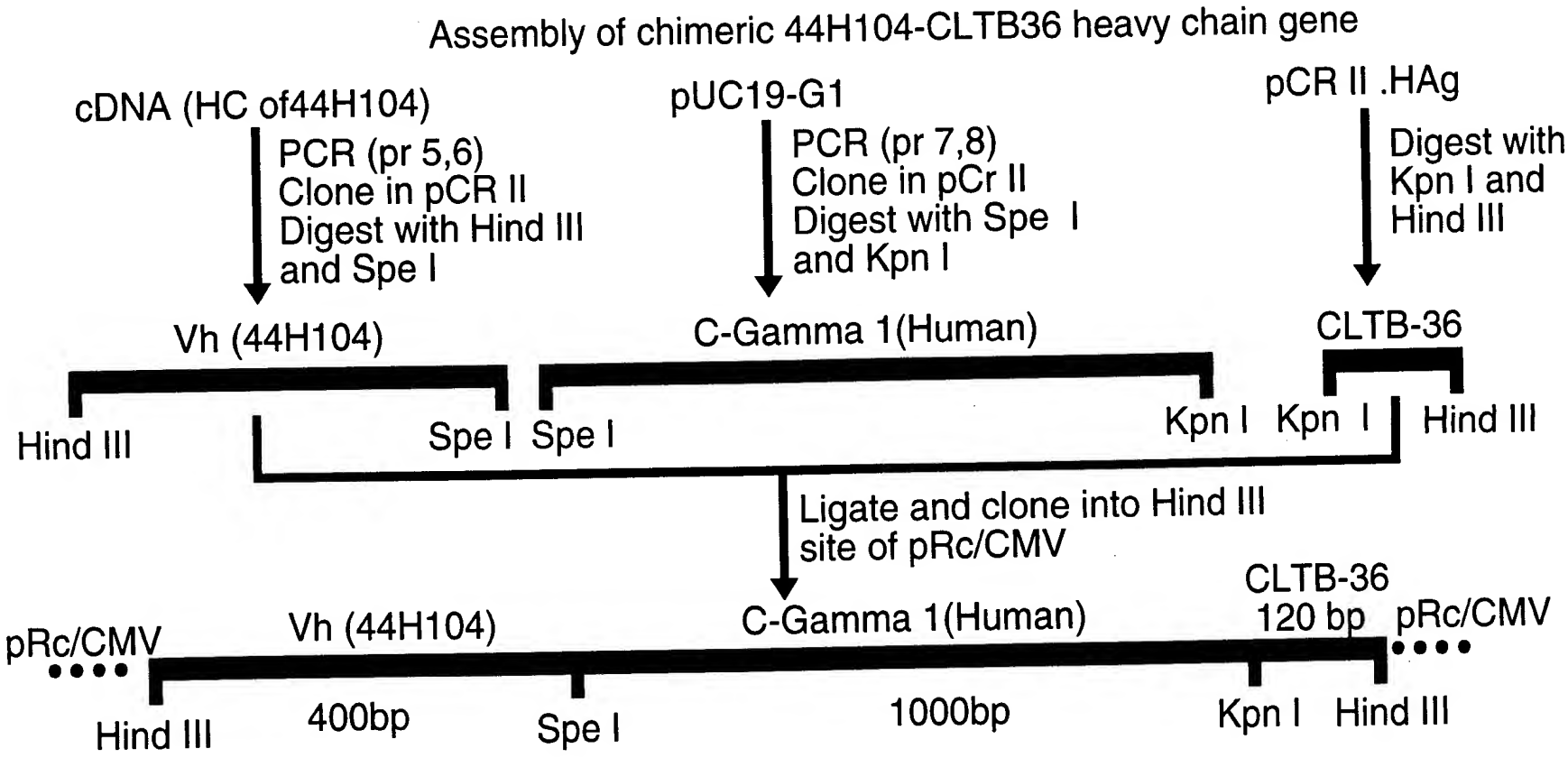


FIG.4A.

Hind III

Pr. 5 AGCTAAGCTTCCGCCATGGCTCTCCTGGTACTGTTC

Spe I

Pr. 6 GCGCACTAGTTCCTTGACCCCAGTAGTCC

Spe I

Pr. 7 GCGCACTAGTGTCACCGCCTCCTCAGCCTCCACCAAGGGCCCATCGGTCTTC

Hind III

Pr. 8 ACGCAAGCTTTTACTAGGTACCTTTACCCGGAGACAGGGAGAG

FIG.4B.

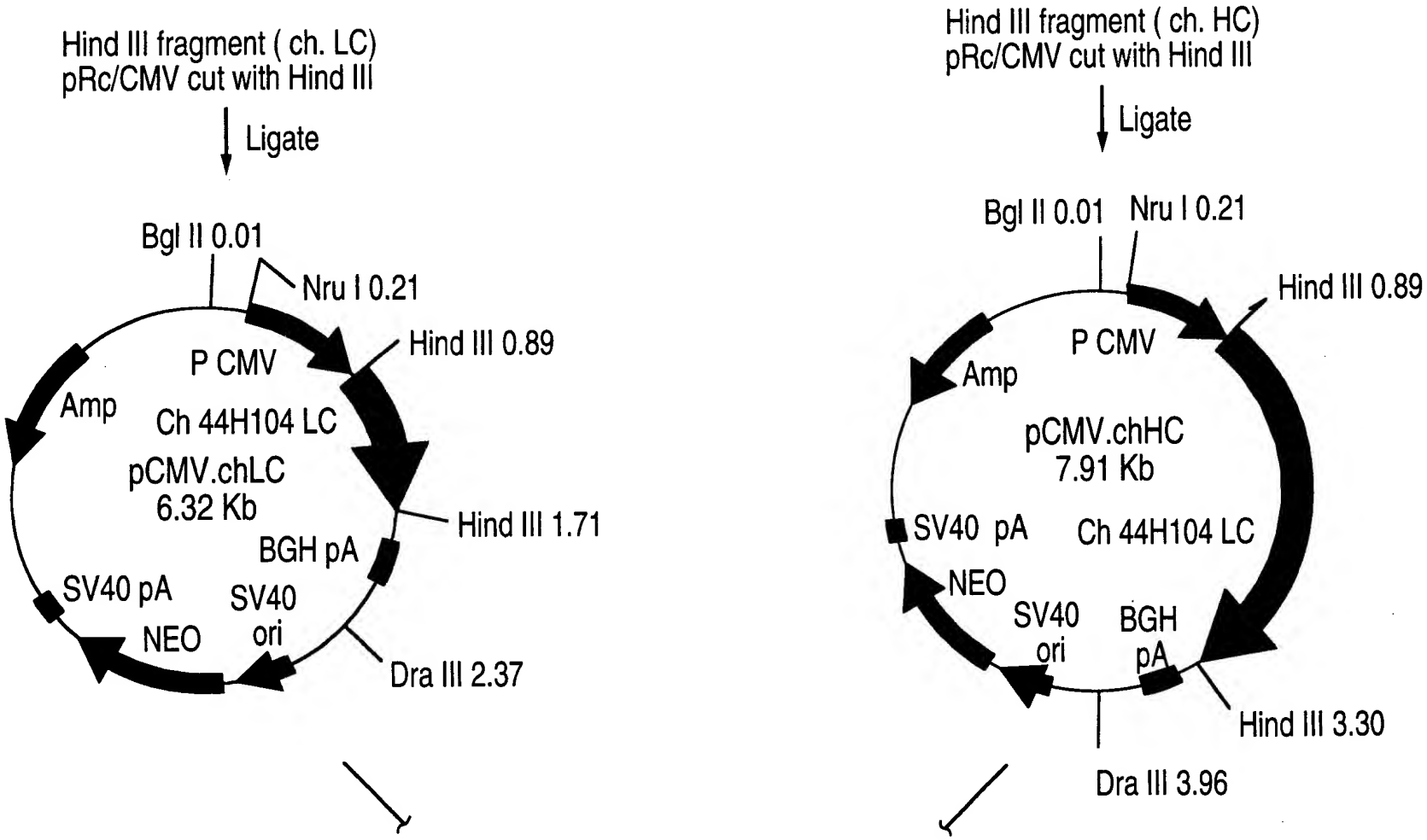


FIG.5A

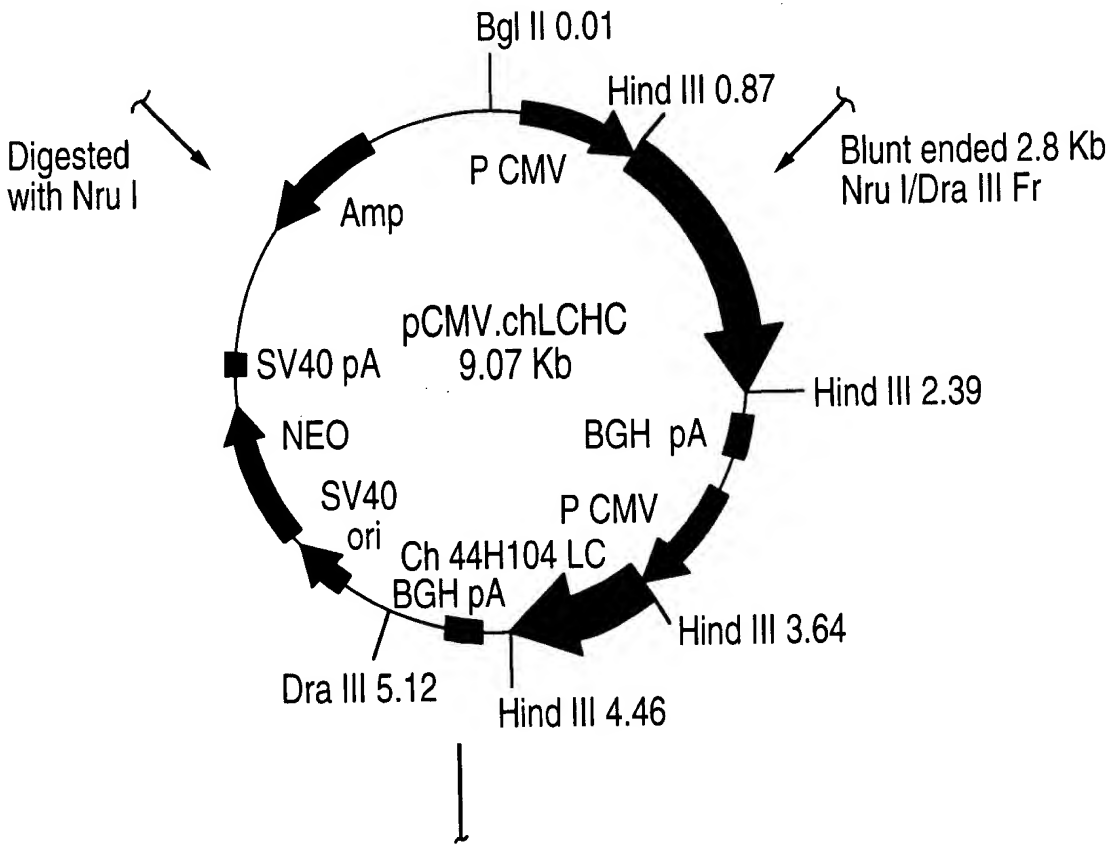


FIG.5B

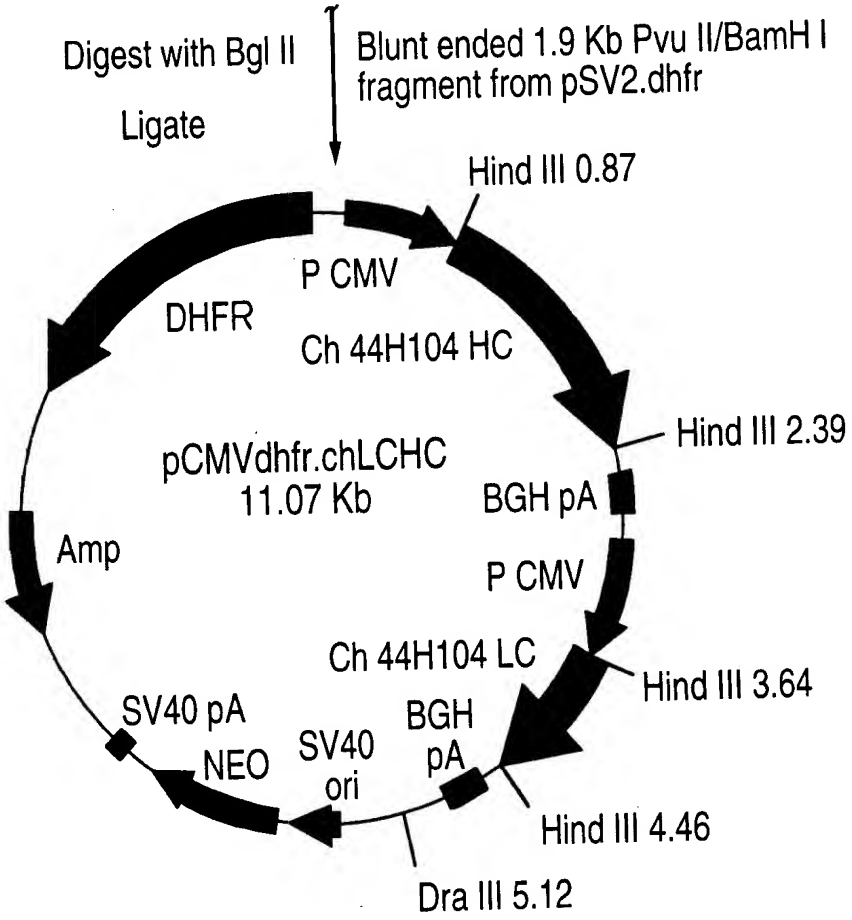


FIG.5C

Epitope Recognition on Recombinant H^+L^+ Human Chimeric Antibody Bound to HLA-DR

Anti-Human IgG

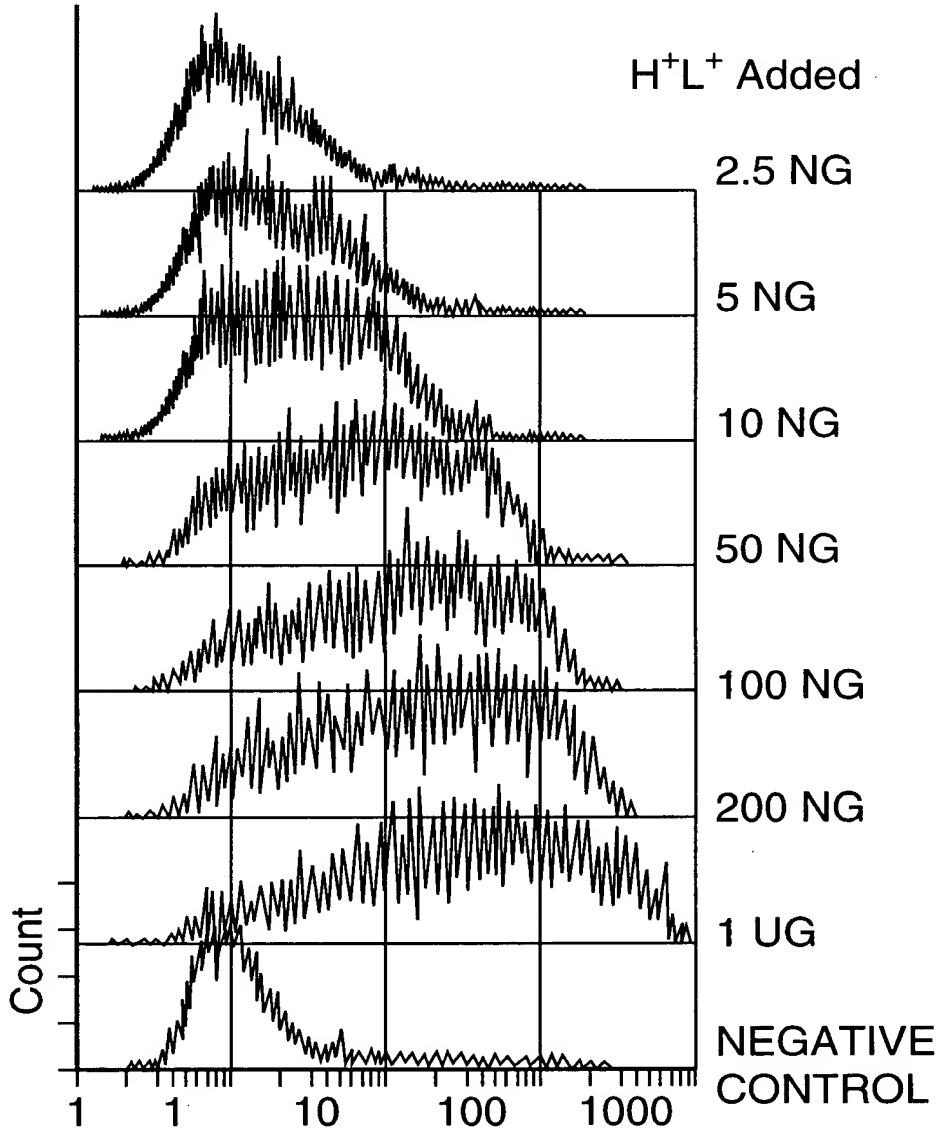


FIG. 6A

Epitope Recognition on Recombinant H^+L^+ Human Chimeric Antibody Bound to HLA-DR

Anti-CLTB-36

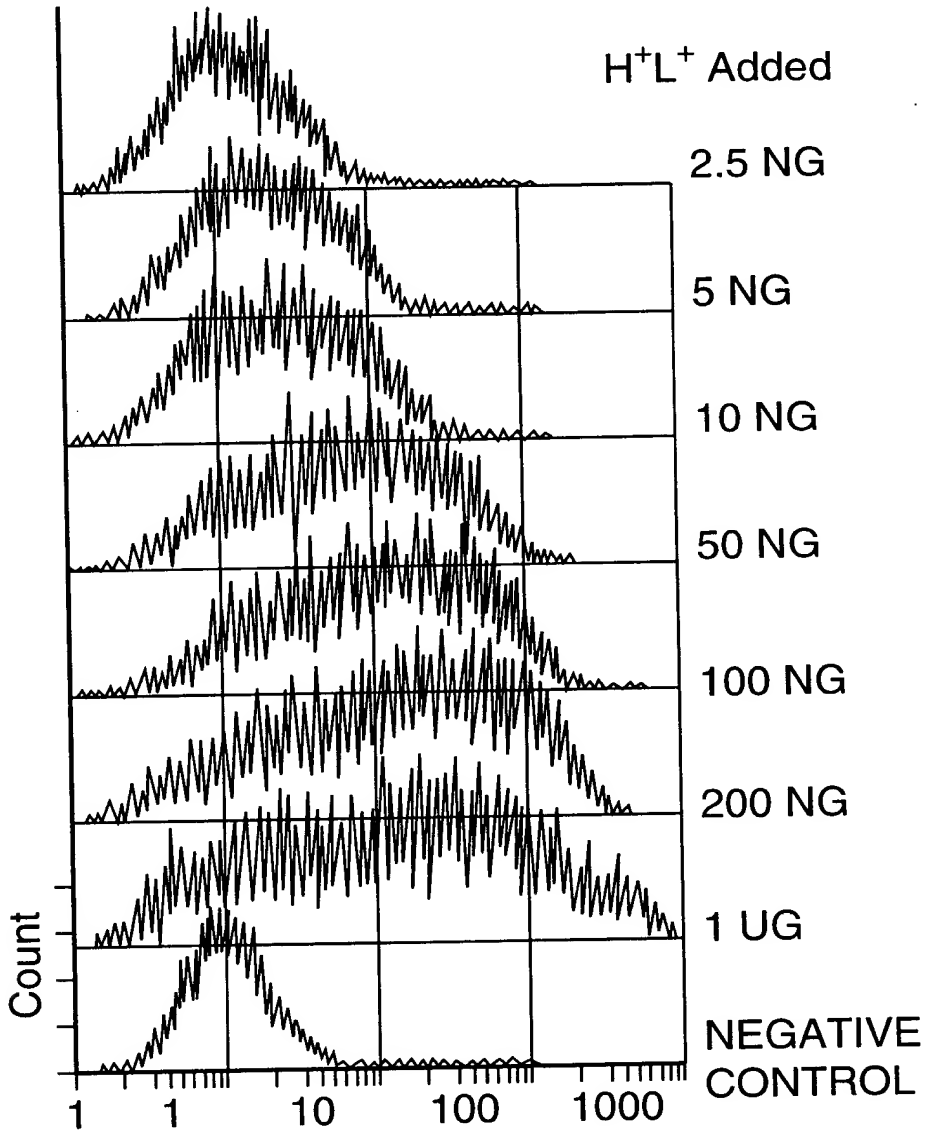


FIG. 6B

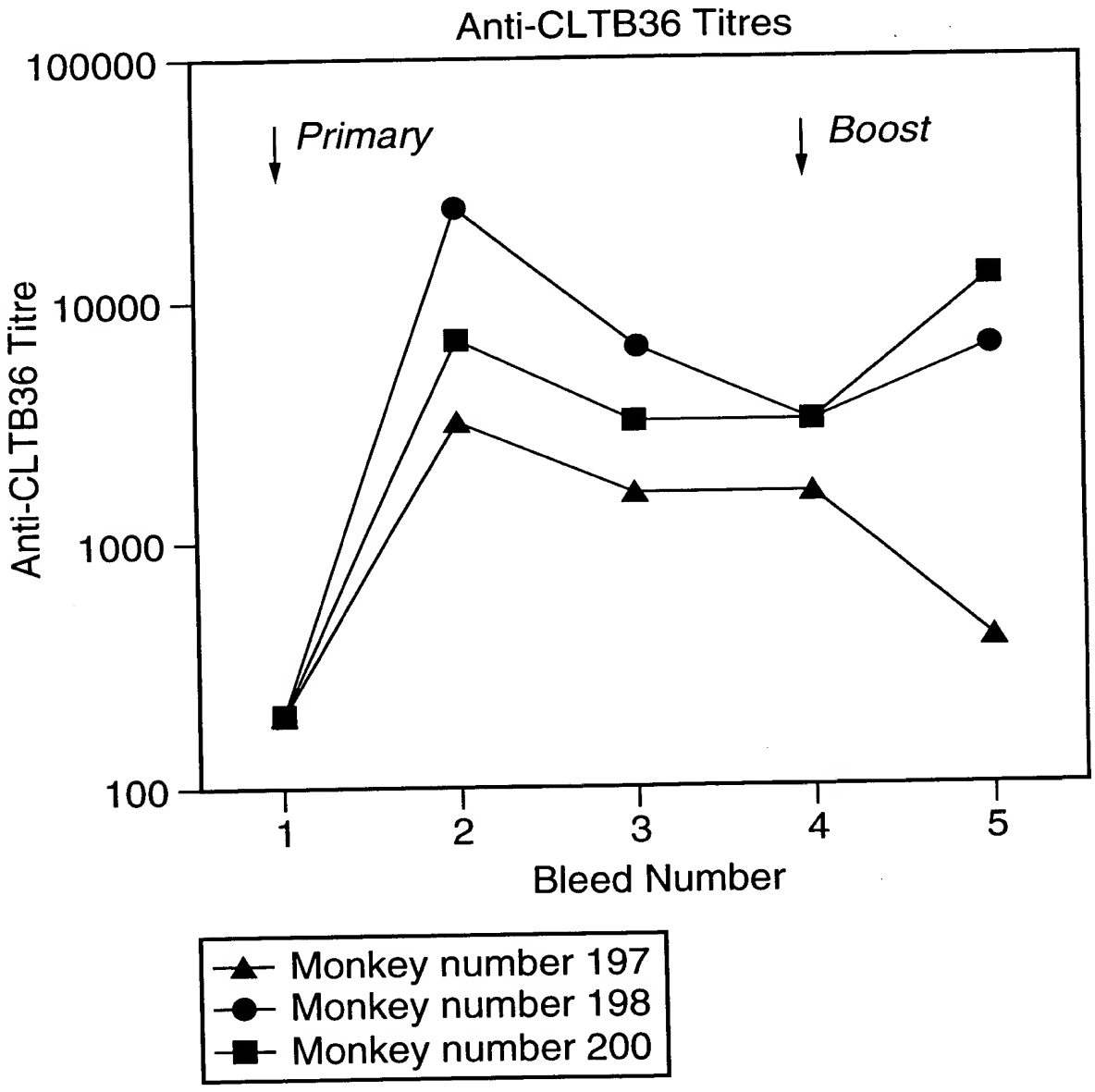


FIG.7

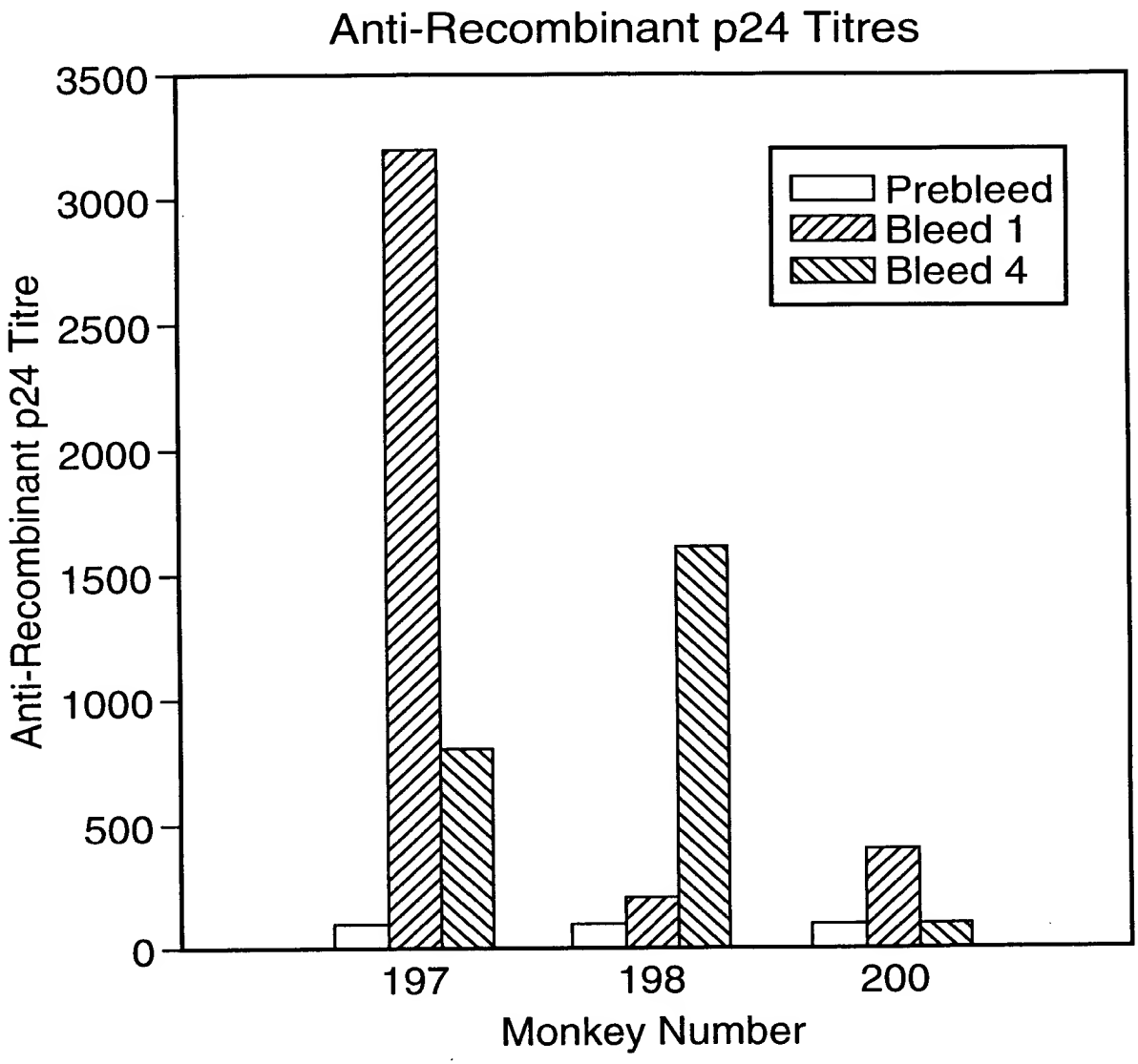
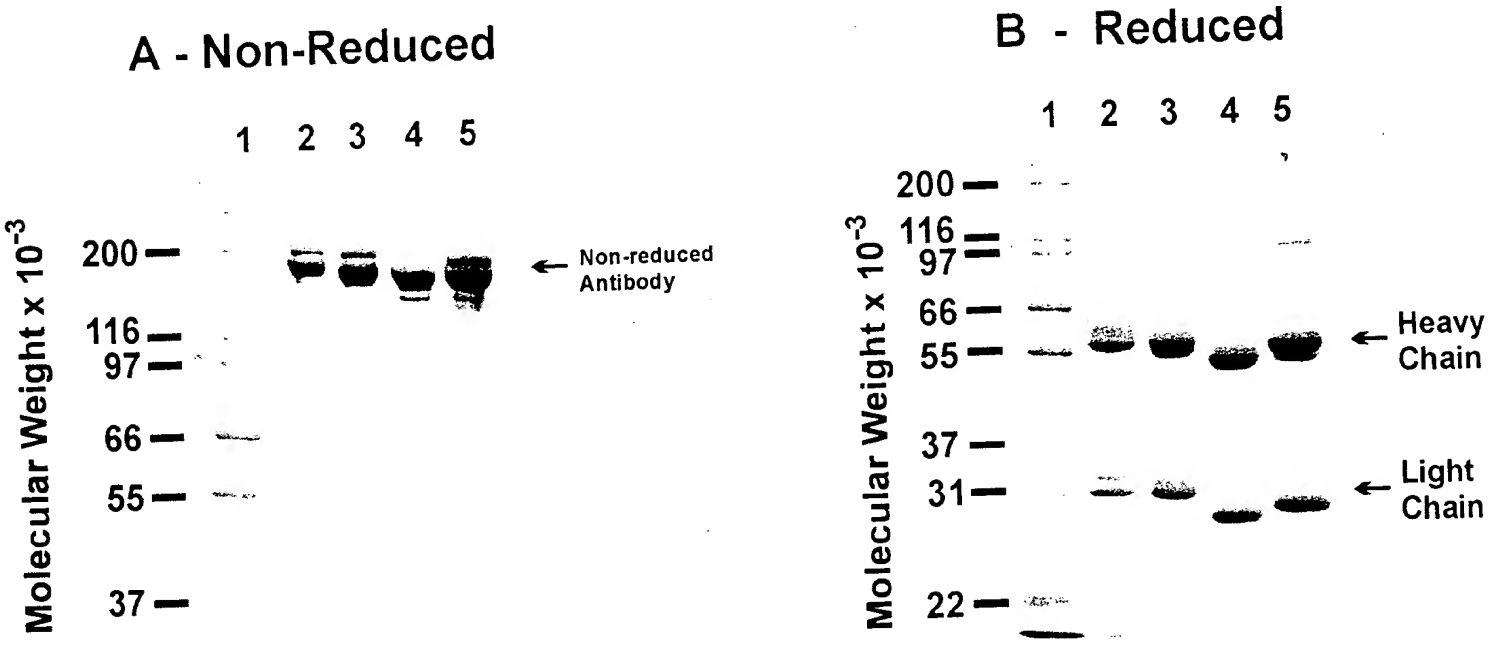
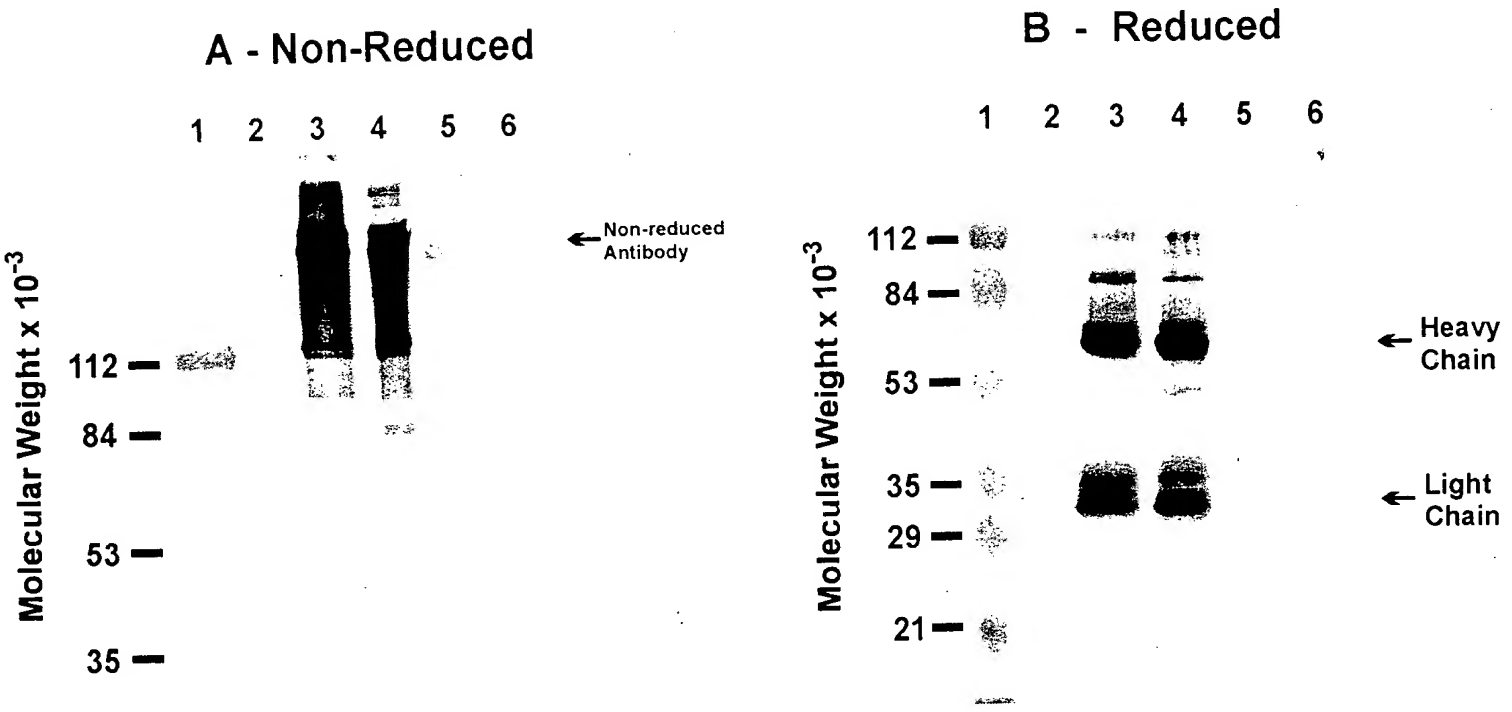


FIG.8



Lane 1 Molecular weight standards
Lane 2 Recombinant targeting antibody - Protein A purified
Lane 3 Recombinant targeting antibody - gel filtration purified
Lane 4 Mouse monoclonal antibody 44H104
Lane 5 Human IgG_1

FIG.9.



Lane 1 Molecular weight standards
Lane 2 Blank lane
Lane 3 Recombinant targeting antibody - Protein A purified
Lane 4 Recombinant targeting antibody - gel filtration purified
Lane 5 Mouse monoclonal antibody 44H104
Lane 6 Human IgG_1

FIG.10.